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| EXAMINER | |
|---|---|
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/529,251 | MIZUGUCHI ET AL. | |
| | Examiner | Art Unit | |
| | EDWARD J. KIM | 2155 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *25 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *24-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/25/2005, 04/19/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This action is a responsive to the application filed on 03/25/2005.

2. Claims 24-46 are pending in this office action.

3. The claims are directed towards a system wherein the devices on a ring-type network stops operating successively when a cessation of the electrical signal from a device is detected.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim **@#$#$%** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 24-46 recite the limitations, "preceding device" and "successive device", which is vague and indefinite to what the terms are referring to. As the Examiner takes the broadest reasonable interpretation of claim language for examination purposes, the terms may refer to any devices on a network.

Claims 24-46 recite the feature of the system wherein a device on the network detects a cessation of a signal from another device. It is vague and indefinite to what this feature is referring to. For example, the feature may be interpreted in multiple ways such as degradation in power of the signal received, no signal received, an electronic signal that corresponds to the "end" of communication, etc.

The Applicant fails to particularly point out and distinctly claims the subject matter which the Applicant regards as the invention.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claim #@#$@ rejected under 35 U.S.C. 102(a) as being anticipated by Ensslin et al. (US Patent #7,386,370 B2), hereinafter referred to as Ensslin.

Ensslin discloses a system and method for temperature management in a Media Oriented System Transport (MOST) network.

Regarding claim 24, Ensslin discloses a data transmission device connected to a ring-type data transmission network, which electrically communicates with another device via a transmission line in a unidirectional manner, the data transmission device comprising: a processing section for processing received data and data to be transmitted based on a predetermined communications protocol (Ensslin, Abstract, fig.1, fig.3, col.1 ln.1-15, 30-39. Ensslin discloses the system to be on a ring-type network, for example, MOST, which is commonly used in vehicle systems.);

a reception section for receiving an electric signal sent from a preceding device and outputting data contained in the electric signal to the processing section; a transmission section for converting a result of a process by the processing section into an electric signal and

transmitting the electric signal to a successive device (Ensslin, Abstract, fig.1, fig.3, col.1 ln.60-67, col.2 ln.38-46, col.3 ln.23-34. Ensslin discloses a receiving and transmitting section of the system. Processors/Microcontrollers are present in each devices on the network for processing the received or transmitted electronic signals.);

a power supply section for supplying power to the processing section, the reception section, and the transmission section (Ensslin, fig.3. Voltage supply);

and a control section for controlling operation of the processing section, the reception section, and the transmission section in accordance with an operation mode of its own device (Ensslin, fig.3, col.4 ln.18-48, coll.4 ln.60-63. Ensslin discloses control sections which control the reception and transmission sections of each devices on the network.),

wherein, the reception section detects cessation of the electric signal sent from the preceding device, if the reception section detects the cessation of the electric signal, the power supply section stops supplying power to the processing section, the reception section, and the transmission section, in response to either one of the cessation of the electric signal sent from the preceding device being detected and power supply from the power supply section being stopped, the reception section stops operating, and in response to either one of the reception section detecting the cessation of the electric signal and the power supply from the power supply section being stopped, the transmission section stops operating and stops sending the electric signal to the successive device (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.4, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses that it is a problem in prior art in the field of endeavor, there exists a problem of a whole network system failing or shutting down because of a failure of a device on the

network, or a device does not transmit a signal to the other devices (for example, Ensslin, col.1). Accordingly, Ensslin discloses that it was well-known in the art that when a signal is not received by a device on a ring-type network, this causes the network to change its state to stand-by mode, shut-down, or the whole system fails. The Examiner notes that the claim reads on this.

Also, Ensslin discloses that in the event of a device on the network receives a cessation signal from the temperature control unit (which may be anywhere in the network – col.7 ln.27-39), the device goes into stand-by mode or switches off, stopping transmission until further notified of wake-up protocol. The transmission and reception sections are suspended from further operation. Furthermore, the device notifies the other devices of cessation of signal.).

Regarding claim 25, Ensslin disclosed the limitations, as described in claim 24, and further discloses, a data transmission device wherein, if the cessation of the electric signal sent from the preceding device is detected, the reception section transmits, to the control section, a data cessation signal for indicating the cessation, and based on the data cessation signal transmitted from the reception section, the control section stops operation of the processing section (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 26, Ensslin disclosed the limitations, as described in claim 24, and further discloses a data transmission device wherein, if the cessation of the electric signal sent from the preceding device is detected, the reception section transmits, to the control section, a data cessation signal for indicating the cessation, based on the data cessation signal transmitted

from the reception section, the control section outputs a signal for stopping operation of the reception section and the transmission section, in response to the signal outputted from the control section in response to the detection, the reception section stops operating, and in response to the signal outputted from the control section in response to the detection, the transmission section stops operating and stops sending the electric signal to the successive device (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Reception and transmission are suspended by the controller, while processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 27, Ensslin disclosed the limitations, as described in claim 24, and further discloses, a data transmission device wherein, if the cessation of the electric signal sent from the preceding device is detected, the reception section transmits, to the control section, a data cessation signal for indicating the cessation, and based on the data cessation signal transmitted from the reception section, the control section performs control of stopping the power supply section from supplying power to the processing section, the reception section, and the transmission section (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses suspension of supplying power. When the device is shut down, the power supply ceases to supply power. Stand-by mode and shut down of the device is for saving power when necessary.).

Regarding claim 28, Ensslin disclosed the limitations, as described in claim 27, and further discloses, a data transmission device, further comprising a signal monitoring section for

detecting the electric signal sent from the preceding device and transmitting, to the control section, an electric-signal detection signal for indicating the detection, wherein, if suspended sending of the electric signal sent from the preceding device is resumed, the signal monitoring section detects the electric signal sent from the preceding device, and transmits, to the control section, the electric-signal detection signal for indicating the detection, based on the electric-signal detection signal transmitted from the signal monitoring section, the control section performs control of allowing the power supply section to start supplying power to the processing section, the reception section, and the transmission section to start operation of the processing section, the reception section, and the transmission section, and by control of the control section, the transmission section starts operating and starts sending the electric signal to the successive device (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses wherein the devices on the network listen for the wake-up signal during, which allows power being supplied to the devices.).

Regarding claim 29, Ensslin disclosed the limitations, as described in claim 28, and further discloses a data transmission device wherein the electric signal which the transmission section sends to the successive device after starting operating by control of the control section is a lock signal for establishing clock synchronization (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. It is inherent that in a computer network system wherein processors are involved in communications, clock synchronization is performed

so that the devices on the network are correctly synchronized to receive electronic signals, which are then translated into data.).

Regarding claim 30, Ensslin disclosed the limitations, as described in claim 24, and further discloses, a data transmission device wherein the communications protocol used by the processing section is defined by Media Oriented Systems Transport (MOST) (col.1 ln.1-15, col.1 ln.31-39, col.7 ln.28-30).

Regarding claim 31, Ensslin discloses a data transmission system including a plurality of data transmission devices connected via a transmission line so as to form a ring structure, in which the data transmission devices electrically communicate with one another in a unidirectional manner, the data transmission devices each comprising: a processing section for processing received data and data to be transmitted based on a predetermined communications protocol (Ensslin, Abstract, fig.1, fig.3, col.1 ln.1-15, 30-39. Ensslin discloses the system to be on a ring-type network, for example, MOST, which is commonly used in vehicle systems.);

a reception section for receiving an electric signal sent from a preceding data transmission device and outputting data contained in the electric signal to the processing section; a transmission section for converting a result of a process by the processing section into an electric signal and transmitting the electric signal to a successive data transmission device (Ensslin, Abstract, fig.1, fig.3, col.1 ln.60-67, col.2 ln.38-46, col.3 ln.23-34. Ensslin discloses a receiving and transmitting section of the system. Processors/Microcontrollers are present in each devices on the network for processing the received or transmitted electronic signals.);

a power supply section for supplying power to the processing section, the reception section, and the transmission section of its own device (Ensslin, fig.3. Voltage supply);

and a control section for controlling operation of the processing section, the reception section, and the transmission section in accordance with an operation mode of its own device (Ensslin, fig.3, col.4 ln.18-48, coll.4 ln.60-63. Ensslin discloses control sections which control the reception and transmission sections of each devices on the network.),

wherein, in at least one of the data transmission devices, the control section stops operation of the processing section, the reception section, and the transmission section of its own device based on a predetermined condition for shift, and the transmission section stops transmission of the electric signal, and in another data transmission device, the reception section of its own device detects cessation of the electric signal sent from the preceding data transmission device, if the reception section detects the cessation of the electric signal, the power supply section of its own device stops supplying power to the processing section, the reception section, and the transmission section, in response to either one of the cessation of the electric signal sent from the preceding data transmission device being detected and power supply from the power supply section of its own device being stopped, the reception section of its own device stops operating, and in response to either one of the reception section of its own device detecting the cessation of the electric signal and the power supply from the power supply section of its own device being stopped, the transmission section of its own device stops operating and stops sending the electric signal to the successive data transmission device (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.4, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses that it is a problem in prior art in the field of endeavor, there exists a problem of a whole network system failing or shutting down because of a failure of a device on the network, or a device does not transmit a signal to the other

devices (for example, Ensslin, col.1). Accordingly, Ensslin discloses that it was well-known in the art that when a signal is not received by a device on a ring-type network, this causes the network to change its state to stand-by mode, shut-down, or the whole system fails. The Examiner notes that the claim reads on this.

Also, Ensslin discloses that in the event of a device on the network receives a cessation signal from the temperature control unit (which may be anywhere in the network – col.7 ln.27-39), the device goes into stand-by mode or switches off, stopping transmission until further notified of wake-up protocol. The transmission and reception sections are suspended from further operation. Furthermore, the device notifies the other devices of cessation of signal.).

Regarding claim 32, Ensslin disclosed the limitations, as described in claim 31, and further discloses, a data transmission system wherein, in the other data transmission device, if the cessation of the electric signal sent from the preceding data transmission device is detected, the reception section transmits, to the control section of its own device, a data cessation signal for indicating the cessation, and based on the data cessation signal transmitted from the reception section of its own device, the control section stops operation of the processing section of its own device (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 33, Ensslin disclosed the limitations, as described in claim 31, and further discloses, a data transmission system wherein, in the other data transmission device, if the cessation of the electric signal sent from the preceding data transmission device is detected, the

reception section transmits, to the control section of its own device, a data cessation signal for indicating the cessation, based on the data cessation signal transmitted from the reception section of its own device, the control section outputs a signal for stopping operation of the reception section and the transmission section of its own device, in response to the signal outputted from the control section of its own device in response to the detection, the reception section stops operating, and in response to the signal outputted from the control section of its own device in response to the detection, the transmission section stops operating and stops sending the electric signal to the successive data transmission device (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Reception and transmission are suspended by the controller, while processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 34, Ensslin disclosed the limitations, as described in claim 31, and further discloses, a data transmission system wherein, if the cessation of the electric signal sent from the preceding data transmission device is detected, the reception section transmits, to the control section of its own device, a data cessation signal for indicating the cessation, and based on the data cessation signal transmitted from the reception section of its own device, the control section performs control of stopping the power supply section of its own device from supplying power to the processing section, the reception section, and the transmission section (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses suspension of supplying power. When the device is shut down, the power supply ceases to

supply power. Stand-by mode and shut down of the device is for saving power when necessary.).

Regarding claim 35, Ensslin disclosed the limitations, as described in claim 34, and further discloses, a data transmission system wherein, the data transmission devices each further comprise a signal monitoring section for detecting the electric signal sent from the preceding data transmission device and transmitting, to the control section, an electric-signal detection signal for indicating the detection, in at least one of the data transmission devices, based on a predetermined return condition, the control section performs control of allowing the power supply section to start supplying power to the processing section, the reception section, and the transmission section of its own device in stopped state to start operation of the processing section, the reception section, and the transmission section, and the transmission section resumes the transmission of the electric signal, and in another data transmission device, if suspended sending of the electric signal sent from the preceding data transmission device is resumed, the signal monitoring section detects the electric signal sent from the preceding data transmission device, and transmits, to the control section of its own device, the electric-signal detection signal for indicating the detection; based on the electric-signal detection signal transmitted from the signal monitoring section, the control section performs control of allowing the power supply section to start supplying power to the processing section, the reception section, and the transmission section of its own device to start operation of the processing section, the reception section, and the transmission section (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-

10, col.7 ln.34-39. Ensslin discloses wherein the devices on the network listen for the wake-up signal during, which allows power being supplied to the devices.);

and the transmission section starts operating and starts sending the electric signal to the successive data transmission device (Ensslin, col. , lines ).

Regarding claim 36, Ensslin disclosed the limitations, as described in claim 35, and further discloses, a transmission system wherein the electric signal which each transmission section sends to the successive data transmission device after starting operating by control of the control section is a lock signal for establishing clock synchronization with each other (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. It is inherent that in a computer network system wherein processors are involved in communications, clock synchronization is performed so that the devices on the network are correctly synchronized to receive electronic signals, which are then translated into data.).

Regarding claim 37, Ensslin disclosed the limitations, as described in claim 36, and further discloses, a data transmission system wherein the data transmission device which resumes the transmission of the electric signal based on the predetermined return condition is a master, which performs data transmission with a clock held thereby and is connected to the data transmission system (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.4, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39).

Regarding claim 38, Ensslin disclosed the limitations, as described in claim 31, and further discloses, a data transmission system wherein the communications protocol used by the

processing section is defined by Media Oriented Systems Transport (MOST) (Ensslin, col.1 ln.1-15, col.1 ln.31-39, col.7 ln.28-30).

Regarding claim 39, Ensslin discloses, a data transmission method in which a plurality of nodes are connected via a transmission line so as to form a ring structure and each node electrically communicates with one another in a unidirectional manner, the method comprising: a processing step, performed by each node, of processing received data and data to be transmitted based on a predetermined communications protocol (Ensslin, Abstract, fig.1, fig.3, col.1 ln.1-15, 30-39. Ensslin discloses the system to be on a ring-type network, for example, MOST, which is commonly used in vehicle systems.);

a reception step, performed by each node, of receiving an electric signal sent from a preceding node and sending data contained in the electric signal to the processing step; a transmission step, performed by each node, of transmitting a result of a process by the processing step to a successive node as an electric signal (Ensslin, Abstract, fig.1, fig.3, col.1 ln.60-67, col.2 ln.38-46, col.3 ln.23-34. Ensslin discloses a receiving and transmitting section of the system. Processors/Microcontrollers are present in each devices on the network for processing the received or transmitted electronic signals.);

a power supply step of supplying power used for operation in the processing step, the reception step, and the transmission step (Ensslin, fig.3. Voltage supply);

and a control step, performed by each node, of controlling operation of the processing step, the reception step, and the transmission step in accordance with an operation mode, wherein, in at least one of the nodes, the control step stops operation by the processing step, the reception step, and the transmission step of the node based on a predetermined condition for

shift, and the transmission step stops transmission of the electric signal (Ensslin, fig.3, col.4 ln.18-48, coll.4 ln.60-63. Ensslin discloses control sections which control the reception and transmission sections of each devices on the network.),

and in another node, the reception step of its own node detects cessation of the electric signal sent from the preceding node, if the reception step of its own node detects the cessation of the electric signal, the power supply step of its own node stops supplying power used for operation of the processing step, the reception step, and the transmission step of its own node, in response to either one of the cessation of the electric signal sent from the preceding node being detected and the power supply by the power supply step of its own node being stopped, the reception step of its own node stops operation, and in response to either one of the reception step of its own node detecting the cessation of the electric signal and the power supply step of its own node stopping supplying power, the transmission step of its own node stops operation and stops sending the electric signal to the successive node (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.4, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses that it is a problem in prior art in the field of endeavor, there exists a problem of a whole network system failing or shutting down because of a failure of a device on the network, or a device does not transmit a signal to the other devices (for example, Ensslin, col.1). Accordingly, Ensslin discloses that it was well-known in the art that when a signal is not received by a device on a ring-type network, this causes the network to change its state to stand-by mode, shut-down, or the whole system fails. The Examiner notes that the claim reads on this.

Also, Ensslin discloses that in the event of a device on the network receives a cessation signal from the temperature control unit (which may be anywhere in the network – col.7 ln.27-39), the device goes into stand-by mode or switches off, stopping transmission until further notified of wake-up protocol. The transmission and reception sections are suspended from further operation. Furthermore, the device notifies the other devices of cessation of signal.).

Regarding claim 40, Ensslin disclosed the limitations, as described in claim 39, and further discloses, a data transmission method wherein, in the other node, if the cessation of the electric signal sent from the preceding node is detected, the reception step sends, to the control step of its own node, a notification indicating the cessation, and based on the notification sent by the reception step of its own node, the control step stops operation by the processing step of its own node (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 41, Ensslin disclosed the limitations, as described in claim 39, and further discloses wherein, in the other node, if the cessation of the electric signal sent from the preceding node is detected, the reception step sends, to the control step of its own node, a notification indicating the cessation, based on the notification sent by the reception step of its own node, the control step sends a notification for stopping operation by the reception step and the transmission step of its own node, in response to the notification sent by the control step of its own node in response to the detection, the reception step stops operation, and in response to the notification sent by the control step of its own node in response to the detection, the

transmission step stops operation and stops sending the electric signal to the successive node (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Reception and transmission are suspended by the controller, while processing is also suspended as the device is set to stand-by mode or shut off until further notice, such as wake-up protocol.).

Regarding claim 42, Ensslin disclosed the limitations, as described in claim 39, and further discloses, wherein, if the cessation of the electric signal sent from the preceding node is detected, the reception step sends, to the control step of its own node, a notification indicating the cessation, and based on the notification sent by the reception step of its own node, the control step performs control of stopping the power supply step of its own node from supplying power used for operation of the processing step, the reception step, and the transmission step (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses suspension of supplying power. When the device is shut down, the power supply ceases to supply power. Stand-by mode and shut down of the device is for saving power when necessary.).

Regarding claim 43, Ensslin disclosed the limitations, as described in claim 42, and further discloses, wherein the nodes each further comprise a signal monitoring step of detecting the electric signal sent from the preceding node and sending, to the control step, a notification indicating the detection, in at least one of the nodes, based on a predetermined return condition, the control step performs control of allowing the power supply step to start supplying power used for operation of the processing step, the reception step, and the transmission step of its own node in stopped state to start operation by the processing step, the reception step, and the transmission

step, and the transmission step resumes the transmission of the electric signal, and in another node, if suspended sending of the electric signal sent from the preceding node is resumed, the signal monitoring step detects the electric signal sent from the preceding node, and sends, to the control step of its own node, the notification indicating the detection; based on the notification indicating the detection sent by the signal monitoring step, the control step performs control of allowing the power supply step to start supplying power used for operation of the processing step, the reception step, and the transmission step of its own node to start operation by the processing step, the reception step, and the transmission step and operation by the transmission step is started to start the sending of the electric signal to the successive node (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. Ensslin discloses wherein the devices on the network listen for the wake-up signal during, which allows power being supplied to the devices.);

Regarding claim 44, Ensslin disclosed the limitations, as described in claim 43, and further discloses, wherein the electric signal which each transmission step sends to the successive node after starting operation by control of the control step is a lock signal for establishing clock synchronization with each other (Ensslin, fig.3, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.50, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39. It is inherent that in a computer network system wherein processors are involved in communications, clock synchronization is performed so that the devices on the network are correctly synchronized to receive electronic signals, which are then translated into data.).

Regarding claim 45, Ensslin disclosed the limitations, as described in claim 44, and further discloses wherein the node which resumes the transmission of the electric signal based on the predetermined return condition is a master, which performs data transmission with a clock held thereby (Ensslin, col.1 ln.1-15, col. 30-38, col.1 ln.62-66, col.2 ln.33-47, col.2 ln.60-67, col.3 ln.24-53, col.3 ln.59 - col.4 ln.4, col.6 ln.19-34, col.7 ln.5-10, col.7 ln.34-39).

Regarding claim 46, Ensslin disclosed the limitations, as described in claim 39, and further discloses, wherein the communications protocol used by the processing step is defined by Media Oriented Systems Transport (MOST) (Ensslin, col.1 ln.1-15, col.1 ln.31-39, col.7 ln.28-30).

## *Conclusion*

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied up on is considered pertinent to applicant's disclosure.

- Dea et al., US Patent #5742833, Programmable power management system and method for network computer stations.
- McKaughan et al., US Patent #5802305, System for remotely waking a sleeping computer in power down state by comparing incoming packet to the list of packets storing on network interface card.
- Klein et al., US Patent #6134665, Computer with remote wake up and transmission of a status packet when the computer fails a self test.

A Shortened statutory period for reply is set to expire 3 month(s) or thirty (30) days, whichever is longer, from the mailing date of this communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward J. Kim whose telephone number is (571) 270-3228. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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